SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT

Site-Wide EIS

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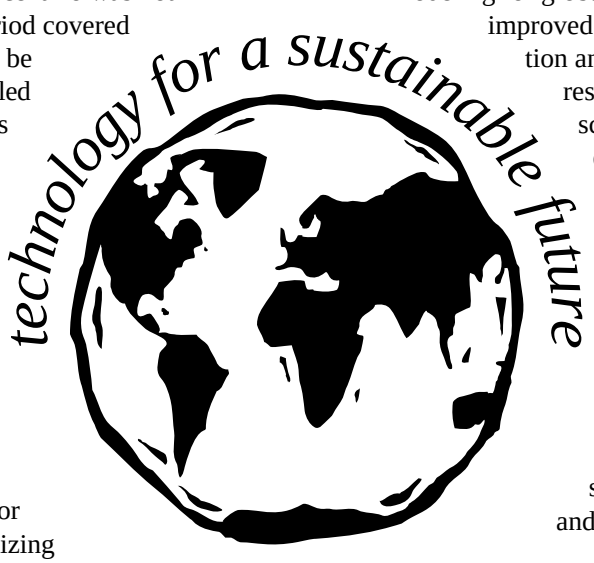
Information for employees about the U.S. Department of Energy's Site-Wide Environmental Impact Statement for LANL

Demystifying the Greener Alternative

During last year's scoping meetings, several public interest groups requested that the LANL site-wide EIS include the assessment of a "Green" alternative—a future Laboratory with no weapons work at all, dedicated to solving environmental problems and developing alternative energy sources. The DOE indicated that because this scenario was not realistic for the ten-year period covered by the SWEIS, it would not be analyzed. The DOE then called a special workshop to discuss the general concerns expressed by the groups—resulting in one of the most unique aspects of the LANL SWEIS: the "Greener" alternative.



The public interest groups and the DOE, with Laboratory representatives participating as technical experts, crafted an outline for a future Laboratory emphasizing "technology for a sustainable future." Over the next ten years, such a direction would reduce weapons production work while increasing non-weapons work, including the advance of non-proliferation, the clean-up of nuclear waste, and the dismantlement of weapons. The groups decided that the term "Greener" (rather than "Green") better described this alternative, which the DOE agreed to assess in the SWEIS.

The group characterized the Greener alternative this way: " The thinking behind the greener alternative includes general values such as ecological sustainability, social equity, personal and social responsibility, nonviolence, decentralization, community-based economics, respect for diversity, global responsibility and partnership, and responsibility toward future generations...i.e., 'technology for a sustainable future."

Corey Cruz, DOE's Project Manager for the LANL SWEIS, described the Greener alternative as "reflective of a LANL that has a central theme and emphasis of Basic Science while continuing to use LANL's unique expertise and capabilities to work in areas of national and international import. This theme focuses LANL on activities in the areas of high energy physics, health and nuclear medicines research, the fundamental nature of matter, computer modeling for global issues, energy technology, improved energy efficience, conservation and renewal of natural resources, and materials science.... Existing areas of expertise would also be used in areas such as international nuclear safety and non-proliferation, including training, detection and surveillance technologies, international cooperative efforts to reduce the international risk of nuclear proliferation, and improved safety in nuclear operations and waste handling/treatment.

"The Greener alternative supports LANL's weapons missions with a 'curatorship' approach including an emphasis on dismantlement, disassembly, and weapon component destruction operations for weapons removed from the stockpile. Weapons-related work would focus on the safety, security, and maintenance of the existing stockpile....The Greener Alternative also includes nuclear materials processing to support storage and handling of the LANL nuclear material inventory, waste minimization, and other research efforts."

GLOSSARY

DOE
Department of Energy

GRAM, Inc.
the contractor hired by DOE to perform the analysis of impacts and prepare the site-wide EIS.

NEPA
National Environmental Policy Act of 1969, the basic U.S. law for protecting the environment

ROD
Record of Decision, a concise public document issued after the completion of a site-wide EIS stating the DOE's decision on the proposed action evaluated in the document.

Tiering
using an established baseline from a previous EIS (usually a broadly-based study such as a programmatic or site-wide approach) as a foundation for additional NEPA analyses.

Inside

ASSEMBLING THE PUZZLE PIECES:
Gathering Data for the Site-Wide EIS

Site-Wide EIS: Who Does What?

DOE
evaluates the site-wide EIS and issues a Record of Decision

Public Stakeholders
help define the scope of the site-wide EIS and review drafts

GRAM, Inc.
consulting firm hired by DOE to perform the analysis of the impacts and to prepare the actual document

LANL Site-Wide EIS Project Office
supplies baseline data inventory to DOE/AL and GRAM, Inc.

Help Us Help You

The Site-Wide EIS Project Office is coordinating this enormous information gathering effort for the Laboratory. The Project Office serves as a single point-of-contact for DOE/AL and the GRAM team in the work with all Laboratory divisions. All requests for information from DOE/AL and the GRAM team should be cleared through the Project Office at 665-8969.

Supporting the preparation of the DOE's site-wide environmental impact statement for LANL is a task with unusual challenges for the Laboratory. While NEPA requires that the effects of proposed federal activities (and alternatives) be evaluated for environmental impacts, the actual *process* for developing the data to be analyzed is not specified in the legislation but is uniquely tailored to the activity or site being studied.

As one of the largest multi-program research laboratories in the world, LANL presents a particularly complex puzzle for the site-wide EIS procedure. Under the guidance of the DOE, the Laboratory is providing technical expertise and support throughout this complicated process to GRAM, the contractor selected to analyze potential impacts and write the site-wide EIS itself.

Unlike an environmental impact statement for a specific building or project (such as DARHT), a site-wide EIS does not go into in-depth detail about all the various facilities and operations at the Laboratory, but must present a more comprehensive look at the Laboratory as a whole. In addition, the LANL site-wide EIS will differ from a single project EIS because the analysis will consider ongoing and reasonably foreseeable activities throughout a ten-year time frame for the entire LANL site, with an in-depth look at a selected set of facilities. So—not only is this puzzle complex and multi-dimensional—it is in motion!

The diagram on these two pages will help you identify the "puzzle pieces," and follow the assembling process, beginning below with a review of the Alternatives descriptions and the list of designated facilities selected by GRAM, to descriptions on the next page of the Alternative Teams, the Key Parameter Teams, and now the Data Development and Collection Teams.

Remember—assembling these puzzle pieces will eventually create "the big picture": A site-wide EIS that provides the DOE and its stakeholders with an analysis of the environmental impacts resulting from ongoing and reasonably forseeable new operations and facilities and reasonable alternatives at the Laboratory. A site-wide EIS provides a basis for site-wide decision-making and improves and coordinates agency plans, functions, programs, and resource utilization for the next ten years.

ALTERNATIVES

Each of the four alternatives describe a framework for possible development over the next ten years (1996-2006). Here are the working definitions for each scenario:

- BASE CASE OR "NO ACTION"
  Reflects a continuation of current facility operations and management plans in support of assigned missions. These missions may entail an increase in some site operations and activities.
- EXPANDED OPERATIONS
  Reflects an increase in operations to the highest reasonably foreseeable levels that can be supported by current facilities. New missions that may be assigned to LANL will be captured by these.
- REDUCED OPERATIONS
  Reflects a reduction of operations to the minimum level necessary to competently maintain the capability to support the mission.
- GREENER
  Reflects utilizing the capabilities and competencies at LANL with increased levels of operations in basic science, waste minimization and treatment, dismantlement, non-proliferation, and other areas of national and international importance and a reduced level of operation for weapons remanufacturing. This alternative neither adds nor eliminates missions from LANL.

KEY FACILITIES

Facilities and areas being used by the GRAM Team as a focus for environmental impact analyses. Selection was based on several criteria: potential environmental impacts, importance to national programs, and greatest public interest. Projections of potential environmental impacts for all four alternatives are being developed for each key facility. Science & Technology refers to the rest of the Laboratory, which will be studied as a whole.

The key facilities are:

Plutonium Facility
Critical Assemblies LACEF
CMR
Sigma
Material Sciences Laboratory
Target Fabrication
Machine Shops
High Explosives Operations
High Explosives Testing
Tritium Operations
Accelerator Technology,
Life Sciences
Radiochemistry
Waste Management

Alternatives Task Teams

By DOE request, LANL established these teams to describe levels of operations at each designated facility for the four alternatives.

For example, the Accelerator-Driven Transmutation Technology program at TA-53 conducts research about using an accelerator beam to convert plutonium and high level radioactive wastes into safer elements.

• No Action: Construct new facility. Conduct experiments for 8 months per year.

• Expanded: Construct new facility. Conduct experiments for 10 months per year. If successful, construct additional test facility by 2008.

• Reduced: No new construction. Conduct reseach at existing LANSCE facilities.

• Greener: This environmentally-friendly program would proceed as in the Expanded Alternative.

Key Parameter Teams

Initiated by DOE, these teams included members from GRAM, LANL, and DOE. Their purpose was to provide an integrated approach for every subject area to be addressed in the SWEIS: the consequences to be addressed, the methodology to be used, and the available and appropriate data to be used. DOE provided initial program/policy input, GRAM developed methodology and performed analyses, and LANL provided insight on data availability and issues, and provided facilitators to expedite the process.

For example, the data needed for Waste Management includes volumes for each category generated annually for each key facility over each alternative for the ten-year time frame, volumes for a good representative year for each category using data from baseline years (1990-1995), the volume of radioactive liquid waste sent to TA-50, and the capacity available for storage/disposal at TA-54 under the four alternatives.

Data Collection and Development Teams

As directed by DOE, these teams will bring together the results of the Alternatives and Key Parameter teams to develop or project the data necessary for GRAM to perform consequence analyses. LANL will document the data estimation approach, and prepare tables of estimate summaries for each key facility and alternative. GRAM will observe the data projection or development to ensure that the "right" data is projected and to understand how the estimates were made.

These teams must determine the emissions, effluents, waste, employment, worker dose, power & water needs, etc., projected for each alternative scenario at each facility. Since no one way to describe the facilities' alternatives will work for estimating all key parameters, the Data Development and Collection Teams are working very closely with each facility's Point of Contact for the SWEIS, the Facility Manager, and GRAM to answer these questions:

What were the baseline values of (1990-1994) parameters? How can the future parameter values be scaled from that baseline using the expected changes in capability "use" across the alternatives? Are the estimates reasonable?

Impact Assessment

The key parameter data will be used by GRAM for doing the impact analysis for all the alternative scenarios.

Current Time Line

This time line shows the most current schedule for completion of the SWEIS. The original schedule has been revised, and is subject to further changes as the site-wide EIS process evolves.

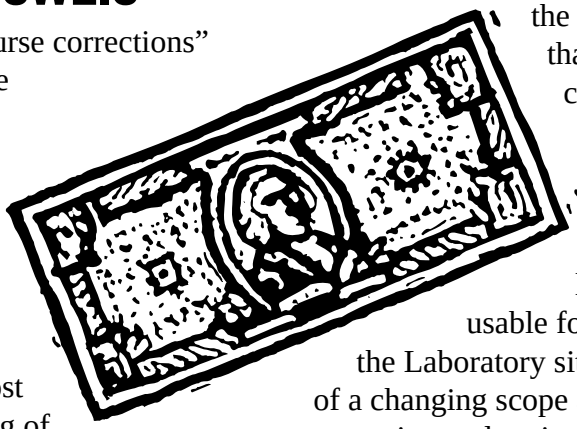
1994
Advance Notice of Intent

1995
Notice of Intent
May
Public Scoping
June
Implementation Plan
November

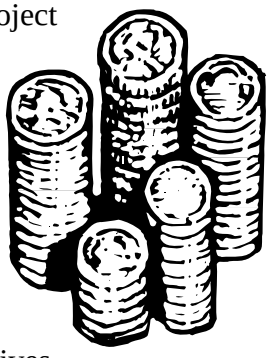
1996
Alternatives Development
Data Collection & Development
Environmental Analysis

1997
Draft SWEIS
February
Public Comment Period
March
Final SWEIS
September
Record of Decision
October

The Price of a SWEIS



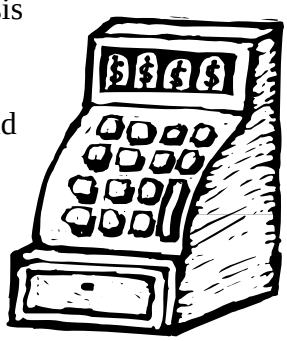
Despite several "mid-course corrections" in the development of the Laboratory's site-wide EIS—including some that have caused the original schedule to slip—at present, the total estimated cost of $20.9 million remains below the $23 million cost projected at the beginning of the process in 1994. The funding for the site-wide EIS was provided by the Laboratory in response to DOE/AL's request.



Some realignment of project activities between the Laboratory and DOE's contractor, GRAM, has resulted in an increase in the LANL costs. The primary cause of this increase was DOE's reassignment of alternatives development from GRAM to the Laboratory, when GRAM and DOE determined that a more intimate knowledge of programs and facility operations was necessary to accomplish this task.

The drivers behind the cost of the SWEIS include a scope that must encompass all concurrent PEIS alternatives that affect the Laboratory (such as Stockpile Stewardship & Management), the lack of information in usable form, the complexity of the Laboratory site, and the "wild cards" of a changing scope and the time needed for execution and review of each step.

Given the cost of the site-wide EIS, what is the value expected? Besides fulfilling the legal requirements, the site-wide EIS will be valuable for site management as a basis for: land use and planning issues; environmental issues resolution such as wetlands; waste management planning; project coverage; clarification of project/facilities relationships; developing an environmental information base; and supporting integrated site and facility planning. In addition, the SWEIS will provide a better basis for future tiering of projects requiring NEPA coverage, and hopefully will reduce those costs.



How To Find Us

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For More Information

Hotline
Call the LANL Site-Wide EIS Hotline
1-800-898-6623

Reading Room
The LANL Outreach Center and Reading Room has a special section devoted to documents relevant to the SWEIS, including written transcripts from the public scoping meetings and the Notice of Intent.
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